

Shoulder 好达

SHOULDER ELECTRONICS CO., LTD.

CRYSTAL RESONATOR Data Sheet

PRODUCT 产 品: CRYSTAL RESONATOR

MODEL NO 型 号: SMD0503

PREPARED 编 制: Fengyu

CHECKED 审 核: York

APPROVED 批 准:

DATE 日 期: 2007-01-25

1.GENERAL ITEM

NORMINAL FREQUENCY:**10.00---80.00**MHz

VIBRATION MODE:AT.FUND.

OPERATION TEMPERATURE RANGE:-10 ~+60

STORAGE TEMPERATURE RANG:-30 ~+85

TEST MACHINE:250B

DRIVE LEVEL:**10**uw

LOAD CAPACITANCE:10/12/16/**20**pF

2.ELECTRICAL CHARACTERISTICS(data inclosed)

CONDITION:25+/-3 RELATIVELY HUMIDITY 60%

2.1 FREQUENCY TOLERANCE:+/ -**15/30**ppm

2.2 EQUIVALENT RESISTANCE: **40**

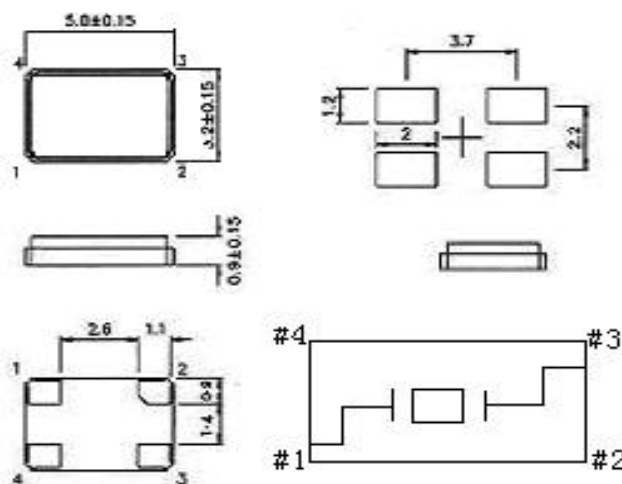
2.3 TEMPERATURE CHARACTERISTICS:+/ -**20**ppm

2.4 SHUNT CAPACITANCE: 7pF

2.5 INSULATION RESISTANCE: 500M /100V+/-15V D.C

2.6 AGING CHARACTERISTICS:+/ -5ppm/YEAR

3.DIMENSION



4.RELIABILITY

4.1 DROP CHARACTERISTICS

CONDITION: HEIGHT 50CM,3 TIMES,TEST AFTER 1 HOUR

EQUIPMENT:S&A250B,THICKNESS 3CM HARD WOOD

STANDARD:FREQUENCY CHANGE+/- 5PPM,

RR AS SPECIFICATION

4.2 SHAKE CHARACTERISTICS

CONDITION: SHAKE FREQUENCY 10~55HZ, CYC1~2 MINUTES,SWING 1.5MM,

DIRECTION X/Y/Z,ALL 30 MINUTES . TEST AFTER 1 HOUR

EQUIPMENT:S&A250B,TEST MACHINE

STANDARD:FREQUENCY CHANGE+/- 5PPM,

RR AS SPECIFICATION

4.3 AIRPROOF CHARACTERISTICS

CONDITION: PUT CRYSTAL INTO THE PRESSURE CABIN WITH

ALCOHOL,KEEP PRESSURE 0.4-0.5Mpa 10 MINUTES,THEN

TAKE OUT AND BLOW FOR 5 MINUTES

EQUIPMENT: IR MACHINE

STANDARD:IR 500 M

4.4 BEND CHARACTERISTICS

CONDITION: 5N , 90 ° , 3 TIMES

EQUIPMENT:TEST MACHINE

STANDARD:NO DAMAGE

4.5 WELD CHARACTERISTICS

CONDITION: 235 ± 5 、 3 SECONS

EQUIPMENT:TEST MACHINE

STANDARD:90% ADHIBIT TIN OK

4.6 HUMIDITY CHARACTERISTICS

CONDITION:40 +/-2 , HUMIDITY 90-95%,250 HOURS.

EQUIPMENT:S&A250B,TEST CABIN

STANDARD:FREQUENCY CHANGE+/- 5PPM,

RR AS SPECIFICATION

4.7 LOW TEMPERATURE CHARACTERISTICS

CONDITION: -30 ± 2 , AFTER 250 HOURS,PUT IN ROOM TEMPERATURE 1 HOUR

EQUIPMENT:S&A250B,TEST MACHINE

STANDARD:FREQUENCY CHANGE+/- 5PPM,

RR AS SPECIFICATION

4.8 HIGH TEMPERATURE CHARACTERISTICS

CONDITION: 85 ± 2 , AFTER 250 HOURS,PUT IN ROOM TEMPERATURE 1 HOUR

EQUIPMENT:S&A250B,TEST MACHINE

STANDARD:FREQUENCY CHANGE+/- 5PPM,

RR AS SPECIFICATION

4.9 TEMPERATURE CYCLING

CONDITION: EQUIPMENT:S&A250A,TEST MACHINE,

STANDARD:FREQUENCY CHANGE+/- 5PPM,

RR AS SPECIFICATION

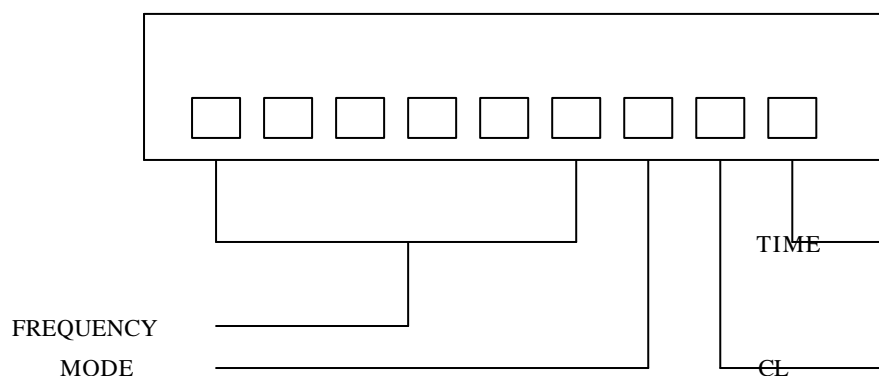
4.10 REFLUENCE EXAMINATION

CONDITION:EQUIPMENT:S&A250A,TEST MACHINE

STANDARD:FREQUENCY CHANGE+/- 10PPM,

RR AS SPECIFICATION

5.MARKING SPECIFICATION



TIME CODE:

MONTH	1	2	3	4	5	6	7	8	9	10	11	12
CODE	1	2	3	4	5	6	7	8	9	O	N	D

CL CODE:

CL	CODE	CL	CODE	CL	CODE	CL	CODE	CL	CODE
Series	0	12pf	7	18pf	E	25pf	M	35pf	U
5pf	1	12.5pf	8	18.7pf	F	27pf	N	45pf	V
7pf	2	13pf	9	19pf	G	28pf	P	47pf	W
7.5pf	3	14.5pf	A	20pf	H	30pf	Q	50pf	X

8pf	4	15pf	B	21pf	J	31pf	R	54pf	Y
10pf	5	16pf	C	22pf	K	32pf	S	其它	Z
11pf	6	17pf	D	24pf	L	33pf	T		

MODE CODE:

MODE	AT CUT	BT CUT	3 RD
CODE	A	B	R

6.PAKING SPECIFICATION

